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17	NORTHERN DISTRICT OF CALIFORNIA	
18	SAN FRANCISCO DIVISION	
19	WAYMO LLC,	Case No. 3:17-cv-00939-WHA
20	Plaintiff,	DECLARATION OF KEVIN FAULKNER IN SUPPORT OF
21	v.	<b>DEFENDANTS' LETTER BRIEF</b>
22	UBER TECHNOLOGIES, INC., OTTOMOTTO LLC; OTTO TRUCKING LLC, Defendants.	REGARDING APRIL 6, 2017 ORDER  Date: May 3, 2017 Time: 7:30 a.m. Ctrm: 8, 19th Floor Judge: The Honorable William Alsup
23		
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25		Trial Date: October 2, 2017
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FAULKNER DECL. ISO DEFENDANTS' LETTER BRIEF RE: APRIL 6, 2017 ORDER Case No. 3:17-cv-00939-WHA

### DECLARATION OF KEVIN FAULKNER

- I, Kevin Faulkner, declare as follows:
- 1. I am a Managing Director and head of the New York digital forensics lab at Stroz Friedberg. My April 7, 2017 declaration in support of Uber's opposition to Waymo's motion for preliminary injunction set forth Stroz Friedberg's retention to investigate whether any Waymo confidential material was placed on Uber's computer systems, and my background and experience in digital forensics. This declaration describes the challenges Uber has encountered in searching for Waymo confidential materials in the manner and timeframe ordered by the Court in its April 6, 2017 discovery order. I make this declaration based on personal knowledge and, if called as a witness, I would testify to the facts listed below.
- 2. Stroz Friedberg's investigative approach in intellectual property misappropriation matters commonly involves the identification, preservation, and collection of potentially relevant data sources followed by forensic analysis and the use of filenames, hash values, and targeted content searching to identify relevant materials. We have developed and refined this methodology through work on numerous intellectual property matters on behalf of both plaintiffs and defendants.
- 3. Stroz has applied these proven methods to this matter, and worked with Uber and its counsel to tailor the approach to specially address Waymo's allegations. From Waymo's complaint and its preliminary injunction papers, we understood the relevant confidential information included the approximate 14,000 SVN files alleged to have been copied by Anthony Levandowski, as well as certain documents that were identified in Waymo's complaint and preliminary injunction papers (herein "the Waymo Materials"). These allegations informed the scope of the custodians we targeted in our searches as well as the approaches we used to search for the Waymo Materials.
- 4. In searching for the Waymo Materials Uber has faced several challenges, further complicated by the April 6 Discovery Order, which have presented a burden for Uber and made it impossible to complete the search the Court ordered by April 14, 2017.

# The number of in-scope custodians in this investigation presents a challenge.

- 5. To identify the Waymo Materials, Stroz, Uber, and outside counsel identified servers and data repositories that potentially maintain information related to LiDAR. Uber also identified 87 Uber employees who had previously worked at Google. Stroz worked with Uber to preserve information for these employees, collect G Suite Gmail and Drive data for these users, and to forensically image computers. The collection is ongoing but, to date, we have collected over 180 computers, devices and accounts, which total over 106.5 terabytes of information. This is the equivalent of over 10.9 billion pages of email data. (*See* https://www.lexisnexis.com/applieddiscovery/lawlibrary/whitePapers/ADI\_FS\_PagesInAGigabyte.pdf, downloaded April 10, 2017.)
- 6. The Court's April 6 Discovery Order requires the searching of servers and any officers, directors, or employees that have anything to do with defendants' LiDAR technology. I understand that this adds 45 additional custodians. Based on the work we have performed to date, a reasonable estimate is that we will need to collect at least an additional 100 devices and/or accounts. The forensic collection of this many devices and accounts for these additional custodians could take at least two or three weeks.

## The complexity of Uber's IT environment presents unique challenges.

- 7. Another complicating factor is the complexity of Uber's IT environment. Many of the in-scope custodians are engineers who have multiple computers with varied operating systems and large amounts of disk storage. Uber also relies heavily on cloud storage and remote hosted computing environments, including the Google G Suite, for much of its server infrastructure. This complexity and G Suite present unique challenges for forensic collection and searching.
- 8. By way of example, the volume of Google Drive data for the first 10 custodians was over 600 gigabytes. To date, neither Google Drive's front-end search capability, nor the programmatic interfaces (APIs) have been able to handle the complicated searches required to identify the Waymo Materials. Uber has sought technical support from Google and has been working on a programmatic method to search in the application, but to meet pending deadlines, we elected to download data from Google Drive to perform the searches in our forensic lab.

  Downloading information from Google Drive for the first 10 custodians took approximately a

week due to many problems. We are continuing to download data, but I understand that Waymo has not identified its 10 priority custodians, so we have not been able to prioritize that data. We are hopeful that we can arrive at a more efficient in-app search solution, but even so, I estimate that it could take at least two weeks to search and collect data from Drive for the remaining custodians. If the in-application searching methods fail and we need to download and search data for all in-scope custodians, this could take as long as a month.

#### The volume of collected materials presents challenges.

9. Forensic analysis and searching of over 106.5 terabytes is a massive undertaking, and this volume will only increase as our collections continue. For the 10 initial custodians, Stroz developed a comprehensive search methodology that parses forensic artifacts related to computer use and searches active and deleted content for filenames and hashes related to the Waymo Materials. Though the time needed for this process varies by device, on average it can take as many as 6-10 hours per computer. Much of this is simply the time required for our computers to parse the data on the images, but forensic examiners also need time to review the results. I estimate that even with a large team of examiners and scores of computers processing data around the clock it will take several weeks to complete these searches for the remaining custodians.

#### The ordered searches present additional burden.

- 10. Finally, the search required by the April 6 Order, adds significant burden to the process. As noted in my prior declaration, Stroz Friedberg's findings to date have demonstrated that the Waymo SVN files contain numerous commonly used filenames and other non-unique content that could appear on any computer with Altium or other electrical engineering applications. For this reason, our results for the first ten custodians contain thousands of "false positive" files that take time for Stroz and counsel to sort through and review.
- 11. For this process to be workable, the list of Waymo Materials needs to be refined to a set of truly unique confidential material. Unfortunately, instead of making the search criteria more precise, the Court's Order expands the scope of the searches. The Order requires Uber to search for <u>all</u> of the 14,000-plus allegedly downloaded files, including the common design files that are neither confidential nor originate from Waymo. Further, the Order introduced a set of 15

additional search terms provided by Waymo, which are incredibly broad and appear designed not to identify the Waymo Materials. These terms were so broad that Stroz needed to augment its search methodology to incorporate the use of an additional search application called Relativity. Relativity is designed for wide-sweeping eDiscovery searches and large-scale document review, not forensic searches. Our processing of data into and searching on Relativity is ongoing. As of Sunday evening, we have processed over 2.7 million documents, and have promoted over 130,000 documents for attorney review. While metrics like these are not uncommon during normal, long-term electronic document discovery, this is not an approach that will work to identify Waymo's allegedly stolen material in a short timeframe.

#### A proposed solution.

- 12. In my experience in alleged intellectual property theft matters, I have found that the best solutions are developed when the parties' forensic consultants and subject matter experts work together. Stroz would be happy to participate in a meet and confer with Waymo's forensic consultant to develop a method that achieves Waymo's objective of finding its confidential information, to the extent it exists at Uber. Over the weekend Stroz examined the content of the approximate 14,000 Waymo SVN files to develop additional indicators that could be used to perform more precise searches, including fuzzy and/or block hash values. Together the parties' experts could review these indicators and devise an approach designed to find the alleged stolen Waymo Materials in a manner that is thorough enough to identify the information wherever it might reside, but that does so without returning tens of thousands of irrelevant documents.
- 13. The parties' forensic consultants could make a joint recommendation to the court along with an appropriate timeline given the technical parameters of the search process and the volume and scope of the data to be searched.

I declare under the penalty of perjury under the laws of the United States of America that the foregoing is true and correct. Executed this 10th day of April, 2017, in Paris, France.

Kevin Faulkner